Activity 8  
The Rear-End Collision

Goals…

* Evaluate from simulated collision, the effect of rear-end collisions on the neck muscles
* Understand the causes of whiplash injuries
* Understand Newton’s Second Law of Motion
* Understand the role of safety devices in preventing whiplash injury

For You To Read Key Points To Learn

* Newton’s 2nd law helps us predict when an external force is applied to an object:
  + If a body is acted on by a force, it will accelerate in the Click here to enter text. of the unbalanced force
  + The acceleration will be Click here to enter text. for Click here to enter text. masses
  + The acceleration can be an Click here to enter text. in speed, a Click here to enter text. in speed or a change in Click here to enter text.
* So, the change in motion is determined by the Click here to enter text. acting on the object and the Click here to enter text. itself
* The rear-end collision:
  + Car is stopped – driver is at Click here to enter text. (1st)
  + Stopped car is hit from the rear
  + Car begins to Click here to enter text. (2nd)
  + Seatback pushes driver forward & Click here to enter text. with car(1st & 2nd), *driver’s* Click here to enter text. *is not supported and stays* Click here to enter text. *(1st)*
  + Neck muscles hold head to torso, then “Click here to enter text.” head forward to catch up with torso(1st & 2nd)
  + Click here to enter text.pull the head back to its usual position(1st & 2nd)